bine, coal unit, etc. Generally, the response time of a slow unit is greater than 1 minute, but such response times can vary. The second energy storage device **122** can be an energy storage unit with a fast response. This group includes one or more of the following: a flywheel, sodium-sulfur battery bank, lithium-ion battery bank, flow battery bank, super capacitor bank etc. Generally, the response time of a fast unit is less than 1 minute, and can be nearly instantaneous. Other known or future developed slow and fast units can be used. In any event, the first and second devices are of different types with different response times. The controller **130** includes an algorithm for tracking the regulation signal and uses the fast unit, when it has sufficient energy, to absorb or track changes in the regulation signal, while leaving the slow unit at substantially constant power. In this way, the response time can be faster and wear and tear on the slow unit is avoided. If the fast unit is outside of a necessary energy range, then the slow unit can be used to charge or discharge the fast unit. Additionally, the slow unit can be used to absorb some of the changes in the regulation signal in combination with the fast unit. The regulation signal **112** can be received by the hybrid energy storage system **100** and filtered by filter **140** to remove outlier data and/or noise. Filters for removing outlier data are well-known in the art and are used to remove corrupted data or data considered not valid from the regulation signal. After outlier data is removed from the regulation signal, it is passed to a parameter selector and state tracking unit of the first energy device **150**. As further described below, the parameter selector **150** can be used to dynamically modify energy bands in order to control a distribution of power output between the first energy device **120** and the second energy storage device **122**. The energy bands define what amount of energy in the second energy storage device is considered a desired range. The desired range can be determined based upon many factors. For example, the parameter selector analyzes the regulation signal and feedback from the outputs of the first energy device **120** and the second energy storage device **122**. The parameter selection can also change based on characteristics of the regulation signal, which can vary regionally and seasonally. For example, wind energy can vary based on season. The state tracking of the regulation service changes depending on whether the first energy device is assisting in charging, discharging, or neutral, for the second energy storage unit. The state tracking of the regulation service and the current energy level of the second energy storage device are used to determine the distribution of power provided by the first energy device and the second energy storage device, as further described below.

FIG. **2** illustrates a generalized example of a suitable controller **200** in which the described technologies can be implemented. The controller is not intended to suggest any limitation as to scope of use or functionality, as the technologies may be implemented in diverse general-purpose or special-purpose computing environments.

With reference to FIG. **2**, the controller **200** can include at least one processing unit **210** (e.g., signal processor, microprocessor, ASIC, or other control and processing logic circuitry) coupled to memory **220**. The processing unit **210** executes computer-executable instructions and may be a real or a virtual processor. The memory **220** may be volatile memory (e.g., registers, cache, RAM), non-volatile memory (e.g., ROM, EEPROM, flash memory, etc.), or some combination of the two. The memory **220** can store software **280** implementing any of the technologies described herein.

The controller may have additional features. For example, the controller can include storage **240**, one or more input devices **250**, one or more output devices **260**, and one or more communication connections **270**. An interconnection mechanism (not shown), such as a bus or network interconnects the components. Typically, operating system software (not shown) provides an operating environment for other software executing in the controller and coordinates activities of the components of the controller.

The storage **240** may be removable or non-removable, and can include magnetic disks, magnetic tapes or cassettes, CD-ROMs, CD-RWs, DVDs, or any other computer-readable media that can be used to store information and which can be accessed within the controller. The storage **240** can store software **280** containing instructions for controlling the first and second energy storage devices.

The input device(s) **250** can be a touch input device such as a keyboard, mouse, pen, or trackball, a voice input device, a scanning device, or another device. The output device(s) **260** may be a display, printer, speaker, CD- or DVD-writer, or another device that provides output from the controller. Some input/output devices, such as a touchscreen, may include both input and output functionality.

The communication connection(s) **270** enables communication over a communication mechanism to another computing entity. The communication mechanism conveys information such as computer-executable instructions, audio/video or other information, or other data. By way of example, and not limitation, communication mechanisms include wired or wireless techniques implemented with an electrical, optical, RF, microwaves, infrared, acoustic, or other carrier.

FIG. **3** is a flowchart of a method for providing the regulation service. In process block **310**, a regulation service is provided by using a first energy unit and a second energy storage unit. The first energy unit can be unit **120** from FIG. **1** and the second energy storage unit can be unit **122**. In process block **320**, a regulation signal is received indicating a change of output needed to meet an imbalance on the electrical power grid. In process block **330**, the second energy storage unit tracks the change in the regulation signal, while the first energy unit maintains substantially constant power. This is a desired mode of operation because the second energy storage unit is faster and can track the regulation much more accurately and efficiently. However, the second energy storage unit should be within a desired energy range in order to track the regulation signal. If it is undercharged or overcharged, it can be necessary for the first energy unit to absorb some of the tracking responsibility so that both the first and second units together track the regulation signal. The determination regarding the distribution of power is made by the controller **130**.

FIG. **4** is a flowchart of a method illustrating another embodiment wherein the energy bands associated with the second energy storage unit are dynamically modified. In process block **410**, a hybrid energy storage system is provided. In process block **420**, the energy bands are defined as associated with the second energy storage device. For example, FIG. **5** shows four defined energy bands **O1** (lower outer), **I1** (lower inner), **I2** (upper inner), and **O2** (upper outer). In process block **430**, the energy bands can be dynamically modified to control distribution of the energy output between the first and second energy devices. For example, the energy bands can be initially set to predetermined values, such as 10%, 30%, 60% and 90%, for **O1**, **I1**, **I2**, and **O2**, respectively. After that, the energy bands can be dynamically modified based on feedback signals provided by the outputs of the first and second energy storage devices **120**, **122** and the input regulation signal. As previously described, the controller **130** can then use the dynamically changing parameters together with the state of the regulation service in order to determine how to distribute